MAY 1 3 2004

What I 3 2004

What I is a correspondence will be deposited with the United States Postal Service as first class mail in an envelope addressed to:

Commissioner for Patents,

Alexandria, VA 22313, on May 11, 2004

Date of Deposit

Frank C. Turner, Reg. No. 39,863

Name of applicant, assignee, or Registered Rep.

Signature

PATENT #

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

JAMES F. STEVENS

GROUP ART UNIT

Serial No. 10/827,148

Filed: April 19, 2004

EXAMINER:

For: METHOD AND APPARATUS FOR

PROVIDING A CONTINUOUS STREAM OF REFORMATE

INFORMATION DISCLOSURE STATEMENT

Mail Stop DD Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted pursuant to 37 CFR §§ 1.56, 1.97, and 1.98, particularly 1.97(b). The documents listed on the attached Form PTO/SB/08a are brought to the Examiner's attention. Copies of these documents are enclosed.

05/13/2004 TBESHAH1 00000063 031620 10827148

01 FC:1806 180.00 DA

In the event a first Office Action on the merits has been mailed by the Patent Office before receipt of this Information Disclosure Statement, the Patent Office is authorized to charge the fee under 37 CFR §§ 1.17(p) for this Information Disclosure Statement to Deposit Account No. 03-1620. A duplicate copy of this paper is enclosed for deposit account use, if needed.

Respectfully submitted,

Frank C. Turner

Attorney for Applicant

Reg. No. 39,863

May 11, 2004 Chevron Services Company 1111 Bagby Street, Suite 4040 Houston, Texas 77002 713-752-3084 (voice) 713-752-7969 (fax)

PTO/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TANDENDENTULE for form 1449A/PTO Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Application Number 10/827,148 Filing Date April 19, 2004 First Named Inventor James F. Stevens Art Unit Examiner Name

Complete if Known

(Use as many sheets as necessary)

Sheet 2 X-0169 Attorney Docket Number

| | U.S. PATENT DOCUMENTS | | | | | | |
|---------------------|-----------------------|---|--------------------------------|--|--|--|--|
| Examiner Initials * | Cite No.1 | Document Number Number - Kind Code ² (if known) | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relev Passages or Relevant Figures Appear | | |
| | AA | US-2002-0085967 A1 | 7/4/2002 | Yokata | rigures Appear | | |
| | AB | US-2002-0110503 A1 | 8/15/2002 | Gittleman et al. | | | |
| | AC | US-2003-0148153 A1 | 8/7/2003 | Mitlitsky et al. | | | |
| | AD | US-2003-0150163 A1 | 8/14/2003 | Murata et al. | | | |
| | AE | US-2003-0175564 A1 | 9/18/2003 | Mitlitsky et al. | | | |
| | AF | US-3,108,857 | 10/28/1963 | Gorin et al. | · - | | |
| | AG | US-3,188,179 | 6/8/1965 | Gorin | | | |
| | AH | US-3,627,478 | 12/14/1971 | Tepper | | | |
| | Al | US-4,598,836 | 7/8/1986 | Wessel | | | |
| | AJ | US-5,360,461 | 11/1/1994 | Meinzer | · | | |
| | AK | US-5,614,460 | 3/25/1997 | Schwartz et al. | | | |
| | AL | US-5,653,951 | 8/5/1995 | Rodriguez et al. | | | |
| | AM | US-6,007,699 | 12/28/1999 | Cole | | | |
| | AN | US-6,103,143 | 8/15/2000 | Sircar et al. | | | |
| | AO | US-6,113,673 | 9/5/2000 | Loutfy et al. | | | |
| | AP | US-6,165,643 | 12/26/2000 | Doyle et al. | | | |
| | AQ | US-6,290,753 B1 | 9/18/2001 | Maeland et al. | | | |
| | AR | US-6,432,176 B1 | 8/13/2002 | Klos et al. | | | |
| | AS | US-6,471,935 B2 | 10/29/2002 | Jensen et al. | | | |
| | AT | US-6,534,033 B1 | 3/18/2003 | Amendola et al. | | | |
| | AU | US-6,591,617 B2 | 7/15/2003 | Wolfe | | | |
| - | AV | US-6,596,055 B2 | 7/22/2003 | Cooper et al. | | | |
| | AW | US-6,616,891 B1 | 9/9/2003 | Sapru et al. | | | |
| | AX | US-6,630,648 B2 | 10/7/2003 | Gruenwald | | | |
| | AY | US-6,660,680 B1 | 12/9/2003 | Hampden-Smith et al. | | | |
| | AZ | US-6,672,077 B1 | 1/6/2004 | Bradley et al. | | | |
| | AAA | US-6,672,372 B1 | 1/6/2004 | Li et al. | | | |
| | ABB | US-6,682,838 | 1/27/2004 | Stevens | | | |
| | ACC | US-6,685,762 | 2/3/2004 | Brewster et al. | | | |
| | ADD | US-6,685,821 B2 | 2/3/2004 | Kosek et al. | | | |
| | | | | 1 | | | |

| Examiner Signature | Date Considered | |
|-----------------------|--------------------|--|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \(^1\) Applicant's unique citation designation number (optional). \(^2\) See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. \(^3\) Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \(^4\) For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \(^5\) Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \(^6\) Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

| Substitute | for form 1449 | 9B/PTO | | | Complete if Known | |
|------------|---------------|-------------|--------------|------------------------|-------------------|--|
| INICO | DRAATI | ON DI | | Application Number | 10/827,148 | |
| | | | SCLOSURE | Filing Date | April 19, 2004 | |
| SIA | EMEN | IBYA | APPLICANT | First Named Inventor | James F. Stevens | |
| | | | | Art Unit | | |
| | (Use as ma | ny sheets a | s necessary) | Examiner Name | | |
| Sheet | 2 | of | 2 | Attorney Docket Number | X-0169 | |

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|------|--|--------------------|--------------------------------|--|----------------|
| Examiner | Cite | Foreign Patent Document | Publication | Name of Patentee or | Pages, Columns, Lines, | " |
| Initials* | No.1 | Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>) | Date MM-DD-YYYY | Applicant of Cited Document | Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | BA | EP 1,187,668 (WO 00/76629) | 3/20/2002 | Connor et al. | | |
| | BB | JP 2000-273472 | 10/3/2000 | Tatsuo et al. | | |
| | BC | JP 2002-208425 | 7/26/2002 | Yukitaka et al. | | |

| | | NON PATENT LITERATURE DOCUMENTS | |
|------------------------|--------------|---|-----|
| Examiner Initials * | Cite No.1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T 2 |
| | CA | Alpay et al., "Combined Reaction and Separation in Pressure Swing Processes," Chemical Engineering Science, Vol. 49, No. 24B, pp 5845-5864 | |
| | СВ | Berty et al., "Beat the equilibrium," Chemtech, October 1990, pp 624-629 | |
| | СС | Carvill et al., "Sorption-enhanced reaction process," AIChE Journal, Oct. 1996, Vol. 42, No. 10, pp 2765-2772 | |
| | CD | Han et al., "Simultaneous shift reaction and carbon dioxide separation for the direct production of hydrogen," Chemical Engineering Science, Vol. 49, No. 24B, pp 5875-5883 (1995) | |
| | CE | Hufton et al., "Sorption-enhanced reaction process for hydrogen production," <i>AIChE Journal</i> , Feb. 1999, Vol. 45, No. 2, pp 248-256 | |
| _ | CF | Kuramoto et al., "Repetitive carbonation-calcination reactions of Ca-based sorbents for efficient CO₂ sorption at elevated temperatures," <i>Ind. Eng. Chem. Res.</i> , 2003, Vol. 42, pp 975-981 | |
| | cG | Lin et al., "Hydrogen production from hydrocarbon by integration of water-carbon reaction and carbon dioxide removal (HyPr-RING Method)," Energy and Fuels, 2001, Vol. 15, pp 339-343 | |
| | СН | Rizeq et al., "Fuel-flexible gasification-combustion technology for production of H ₂ and sequestration-ready CO ₂ ," Annual Technical Progress Report 2002, October 2002, DOE Award No. DE-FC26-00FT40974, General Electric and Environmental Research Corporation | |
| | CI | Silaban et al., "High temperature capture of carbon dioxide: characteristics of the reversible reaction between CaO(s) and CO ₂ (g)," Chem. Eng. Comm., 1995, Vol. 137, pp 177-190 | |
| | | | |

| Examiner | Date | |
|-----------|----------------|--|
| Signature | Considered | |

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.